UNITED STATES PATENT AND TRADEMARK OFFICE

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09/895,047	06/29/2001	Santosh S. Chandrachood	CISCO-4306	9309

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David B. Ritchie
Thelen Reid & Priest LLP
P.O. Box 640640
San Jose, CA 95164-0640

BATURAY, ALICIA

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/895,047	CHANDRACHOOD, SANTOSH S.
	Examiner	Art Unit	
	Alicia Baturay	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 September 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>74-105</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>74-105</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>21 March 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>02032004</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 74-105 are presented for examination.

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection.   Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR

1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn

pursuant to 37 CFR 1.114.   Applicant's submission filed on 09 August 2005 has been

entered.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any
new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this
title.

4.   Claims 74-97 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

        The language of claims 74-97 raises a question as to whether the claim is directed merely

to an abstract idea that is not tied to. a technological art, environment or machine which

would result in a practical application producing a concrete, useful, and tangible result to

form the basis of statutory subject matter under 35 U.S.C. 101.

5.   While claim 74 recites "a method for predictively responding to a network management request", there is nothing in claims 74-81 that explicitly indicate that a computer is performing any of the steps.

6.   While claims 82 and 90 recite "an apparatus for predictively responding to a network management request", there is nothing in claims 82-89 or 91-97 that explicitly indicate that a computer is performing any of the steps.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 74, 75, 79, 82, 83, 87, 90, 91, 95, 98, 99, and 103 are rejected under 35 U.S.C. § 103(a) as being unpatentable by Chen et al. (U.S. 6,076,107) and further in view of Hill et al. (U.S. 6,484,239).

Chen teaches the invention substantially as claimed including a method of data retrieval that reduces the number of message flows in a Simple Network Management Protocol (SNMP) device (see Abstract).

9. With respect to claim 74, Chen teaches a method of predictively responding to a network management data request, the method comprising:

Sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory and determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

10. With respect to claim 75, Chen teaches the invention described in claim 74, including the method further comprising:

Transmitting the network management data request to a network management data core

to respond to the network management data request if the network management data request

does not contain a pattern defined in the memory (Chen, col. 3, lines 32-46).

11.   With respect to claim 79, Chen teaches the invention described in claim 74, including the

method where the network management data request is a Simple Network Management

Protocol (SNMP) request (Chen, col. 5, lines 3-7).

12.   With respect to claim 82, Chen teaches an apparatus for predictively responding to a

network management data request, the apparatus comprising:

A sender coupled to the request classifier configured to send a response including data

responsive to the prefetched network management data request if the data responsive to the

network management data request is contained in the cache of prefetched network

management data and if the network management data request contains a pattern defined in

the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request

classifier configured to initiate periodic data collections for data relating to the pattern if the

data responsive to the network management data request is not contained in the cache of

prefetched network management data but the network management data request contains a

pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request

contains a pattern defined in a memory and further configured to determine if data responsive

to the data request is contained in a cache of prefetched data if the data request contains a

pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

13.   With respect to claim 83, Chen teaches the invention described in claim 82, including the

apparatus further comprising:

Transmitting the network management data request to a network management data core

to respond to the network management data request if the network management data request

does not contain a pattern defined in the memory (Chen, col. 3, lines 32-46).

14.   With respect to claim 87, Chen teaches the invention described in claim 82, including the

apparatus where the network management data request is a Simple Network Management

Protocol (SNMP) request (Chen, col. 5, lines 3-7).

15.   With respect to claim 90, Chen teaches an apparatus for predictively responding to a

network management data request, the apparatus comprising:

Means for sending a response including data responsive to the prefetched network

management data request if the data responsive to the network management data request is

contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

16.   With respect to claim 91, Chen teaches the invention described in claim 90, including the apparatus further comprising:

Transmitting the network management data request to a network management data core to respond to the network management data request if the network management data request does not contain a pattern defined in the memory (Chen, col. 3, lines 32-46).

17.   With respect to claim 95, Chen teaches the invention described in claim 90, including the

apparatus where the network management data request is a Simple Network Management

Protocol (SNMP) request (Chen, col. 5, lines 3-7).

18.   With respect to claim 98, Chen teaches a program storage device, readable by a machine,

embodying a program of instructions executable by the machine to perform a method for

predictively responding to a network management data request, the method comprising:

Sending a response including data responsive to the prefetched network management

data request if the data responsive to the network management data request is contained in

the cache of prefetched network management data and if the network management data

request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating

periodic data collections for data relating to the pattern if the data responsive to the network

management data request is not contained in the cache of prefetched network management

data but the network management data request contains a pattern defined in the memory

(Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory; determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

19.   With respect to claim 99, Chen teaches the invention described in claim 98, including the program storage device further comprising:

Transmitting the network management data request to a network management data core to respond to the network management data request if the network management data request does not contain a pattern defined in the memory (Chen, col. 3, lines 32-46).

20.   With respect to claim 103, Chen teaches the invention described in claim 98, including the program storage device where the network management data request is a Simple Network Management Protocol (SNMP) request (Chen, col. 5, lines 3-7).

Claim Rejections - 35 USC § 103

21.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22.   Claims 76-78, 80, 81, 84-86, 88, 89, 92-94, 96, 97, 100-102, 104, and 105 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Hill and further in view

of Case et al. ("Request for Comments: 1157").

Chen teaches the invention substantially as claimed including a method of data retrieval

that reduces the number of message flows in a Simple Network Management Protocol

(SNMP) device (see Abstract).

23.   With respect to claim 76, Chen teaches the invention described in claim 74, including

sending a response including data responsive to the prefetched network management data

request if the data responsive to the network management data request is contained in the

cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating

periodic data collections for data relating to the pattern if the data responsive to the network

management data request is not contained in the cache of prefetched network management

data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory and determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory and determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern is identified by a pattern; and the pattern ID

comprises a community string (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of

traffic generated by the network management function.

24.   With respect to claim 77, Chen teaches the invention described in claim 76, including

sending a response including data responsive to the prefetched network management data

request if the data responsive to the network management data request is contained in the

cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating

periodic data collections for data relating to the pattern if the data responsive to the network

management data request is not contained in the cache of prefetched network management

data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory and determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory and determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern further comprises a periodicity of bursts for network management data requests containing the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

25.   With respect to claim 78, Chen teaches the invention described in claim 77, including sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory and determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory and determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the initiating periodic data collections comprise of.

However, Case teaches where the initiating includes initiating periodic data collections at a rate matching the periodicity of bursts for network management data requests containing the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

26.   With respect to claim 80, Chen teaches the invention described in claim 74, including sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory and determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network

management data request if the data responsive to the network management data request is

contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and

initiating periodic data collections for data relating to the pattern if the data responsive to the

network management data request is not contained in the cache of prefetched network

management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory and determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises

of.

However, Case teaches where the pattern comprises a network management system IP

address (Case, page 13, last paragraph – page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

27.   With respect to claim 81, Chen teaches the invention described in claim 74, including sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory and determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is

contained in the cache of prefetched network management data (Chen, col. 7, lines 1-7); and

initiating periodic data collections for data relating to the pattern if the data responsive to the

network management data request is not contained in the cache of prefetched network

management data (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory and determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises

of.

However, Case teaches where the pattern comprises a network management system port

number (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of

traffic generated by the network management function.

28.   With respect to claim 84, Chen teaches the invention described in claim 82, including a

sender coupled to the request classifier configured to send a response including data

responsive to the prefetched network management data request if the data responsive to the

network management data request is contained in the cache of prefetched network

management data and if the network management data request contains a pattern defined in

the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request

classifier configured to initiate periodic data collections for data relating to the pattern if the

data responsive to the network management data request is not contained in the cache of

prefetched network management data but the network management data request contains a

pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request

contains a pattern defined in a memory and further configured to determine if data responsive

to the data request is contained in a cache of prefetched data if the data request contains a

pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

Chen teaches a sender coupled to the request classifier configured to send a response

including data responsive to the prefetched network management data request if the data

responsive to the network management data request is contained in the cache of prefetched

network management data and if the network management data request contains a pattern

defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the

request classifier configured to initiate periodic data collections for data relating to the

pattern if the data responsive to the network management data request is not contained in the

cache of prefetched network management data but the network management data request

contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request

contains a pattern defined in a memory and further configured to determine if data responsive

to the data request is contained in a cache of prefetched data if the data request contains a

pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises

of.

However, Case teaches where the pattern is identified by a pattern; and the pattern ID

comprises a community string (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

29.   With respect to claim 85, Chen teaches the invention described in claim 84, including a sender coupled to the request classifier configured to send a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request classifier configured to initiate periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request contains a pattern defined in a memory and further configured to determine if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches a sender coupled to the request classifier configured to send a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request classifier configured to initiate periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request contains a pattern defined in a memory and further configured to determine if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern further comprises a periodicity of bursts for network management data requests containing the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

30. With respect to claim 86, Chen teaches the invention described in claim 85, including a sender coupled to the request classifier configured to send a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request classifier configured to initiate periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request contains a pattern defined in a memory and further configured to determine if data responsive

to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches a sender coupled to the request classifier configured to send a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request classifier configured to initiate periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request contains a pattern defined in a memory and further configured to determine if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the initiating periodic

data collections comprise of.

However, Case teaches where the initiating includes initiating periodic data collections at

a rate matching the periodicity of bursts for network management data requests containing

the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of

traffic generated by the network management function.

31.   With respect to claim 88, Chen teaches the invention described in claim 82, including a

sender coupled to the request classifier configured to send a response including data

responsive to the prefetched network management data request if the data responsive to the

network management data request is contained in the cache of prefetched network

management data and if the network management data request contains a pattern defined in

the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request

classifier configured to initiate periodic data collections for data relating to the pattern if the

data responsive to the network management data request is not contained in the cache of

prefetched network management data but the network management data request contains a

pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request

contains a pattern defined in a memory and further configured to determine if data responsive

to the data request is contained in a cache of prefetched data if the data request contains a

pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

Chen teaches a sender coupled to the request classifier configured to send a response

including data responsive to the prefetched network management data request if the data

responsive to the network management data request is contained in the cache of prefetched

network management data and if the network management data request contains a pattern

defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the

request classifier configured to initiate periodic data collections for data relating to the

pattern if the data responsive to the network management data request is not contained in the

cache of prefetched network management data but the network management data request

contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request contains a pattern defined in a memory and further configured to determine if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern comprises a network management system IP address (Case, page 13, last paragraph – page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

32.   With respect to claim 89, Chen teaches the invention described in claim 82, including a sender coupled to the request classifier configured to send a response including data responsive to the prefetched network management data request if the data responsive to the

network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the request classifier configured to initiate periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request contains a pattern defined in a memory and further configured to determine if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches a sender coupled to the request classifier configured to send a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and a lookahead processor coupled to the

request classifier configured to initiate periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches a request classifier configured to determine if the data request contains a pattern defined in a memory and further configured to determine if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern comprises a network management system port number (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

33.   With respect to claim 92, Chen teaches the invention described in claim 90, including

means for sending a response including data responsive to the prefetched network

management data request if the data responsive to the network management data request is

contained in the cache of prefetched network management data and if the network

management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7);

and means for initiating periodic data collections for data relating to the pattern if the data

responsive to the network management data request is not contained in the cache of

prefetched network management data but the network management data request contains a

pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern

defined in a memory; means for determining if data responsive to the data request is

contained in a cache of prefetched data if the data request contains a pattern defined in the

memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

Chen teaches means for sending a response including data responsive to the prefetched

network management data request if the data responsive to the network management data

request is contained in the cache of prefetched network management data and if the network

management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7);

and means for initiating periodic data collections for data relating to the pattern if the data

responsive to the network management data request is not contained in the cache of

prefetched network management data but the network management data request contains a

pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern

defined in a memory; means for determining if data responsive to the data request is

contained in a cache of prefetched data if the data request contains a pattern defined in the

memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises

of.

However, Case teaches where the pattern is identified by a pattern; and the pattern ID

comprises a community string (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

34.   With respect to claim 93, Chen teaches the invention described in claim 92, including means for sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches means for sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern further comprises a periodicity of bursts for network management data requests containing the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of

traffic generated by the network management function.

35.   With respect to claim 94, Chen teaches the invention described in claim 93, including

means for sending a response including data responsive to the prefetched network

management data request if the data responsive to the network management data request is

contained in the cache of prefetched network management data and if the network

management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7);

and means for initiating periodic data collections for data relating to the pattern if the data

responsive to the network management data request is not contained in the cache of

prefetched network management data but the network management data request contains a

pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern

defined in a memory; means for determining if data responsive to the data request is

contained in a cache of prefetched data if the data request contains a pattern defined in the

memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches means for sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the initiating periodic data collections comprise of.

However, Case teaches where the initiating includes initiating periodic data collections at a rate matching the periodicity of bursts for network management data requests containing the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

36.   With respect to claim 96, Chen teaches the invention described in claim 90, including means for sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12). ·

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches means for sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern comprises a network management system IP address (Case, page 13, last paragraph – page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

37.   With respect to claim 97, Chen teaches the invention described in claim 90, including means for sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches means for sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and means for initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches means for determining if the data request contains a pattern defined in a memory; means for determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises

of.

However, Case teaches where the pattern comprises a network management system port

number (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of

traffic generated by the network management function.

38.   With respect to claim 100, Chen teaches the invention described in claim 98, including

sending a response including data responsive to the prefetched network management data

request if the data responsive to the network management data request is contained in the

cache of prefetched network management data and if the network management data request

contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data

collections for data relating to the pattern if the data responsive to the network management

data request is not contained in the cache of prefetched network management data but the

network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory; determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory; determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern is identified by a pattern; and the pattern ID comprises a community string (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

39.   With respect to claim 101, Chen teaches the invention described in claim 98, including sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request

contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory; determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network

management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory; determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern further comprises a periodicity of bursts for network management data requests containing the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

40.   With respect to claim 102, Chen teaches the invention described in claim 101, including

sending a response including data responsive to the prefetched network management data

request if the data responsive to the network management data request is contained in the

cache of prefetched network management data and if the network management data request

contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data

collections for data relating to the pattern if the data responsive to the network management

data request is not contained in the cache of prefetched network management data but the

network management data request contains a pattern defined in the memory (Chen, col. 7,

lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory; determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

Chen teaches sending a response including data responsive to the prefetched network

management data request if the data responsive to the network management data request is

contained in the cache of prefetched network management data and if the network

management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7);

and initiating periodic data collections for data relating to the pattern if the data responsive to

the network management data request is not contained in the cache of prefetched network

management data but the network management data request contains a pattern defined in the

memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory; determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the initiating periodic

data collections comprise of.

However, Case teaches where the initiating includes initiating periodic data collections

at a rate matching the periodicity of bursts for network management data requests containing

the pattern (Chen, col. 6, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify the combination of Chen and Hill in view of Case in order to use a

specific type of pattern. One would be motivated to do so in order to minimize the amount of

traffic generated by the network management function.

41.   With respect to claim 104, Chen teaches the invention described in claim 98, including

sending a response including data responsive to the prefetched network management data

request if the data responsive to the network management data request is contained in the

cache of prefetched network management data and if the network management data request

contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data

collections for data relating to the pattern if the data responsive to the network management

data request is not contained in the cache of prefetched network management data but the

network management data request contains a pattern defined in the memory (Chen, col. 7,

lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory; determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

Chen teaches sending a response including data responsive to the prefetched network

management data request if the data responsive to the network management data request is

contained in the cache of prefetched network management data and if the network

management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7);

and initiating periodic data collections for data relating to the pattern if the data responsive to

the network management data request is not contained in the cache of prefetched network

management data but the network management data request contains a pattern defined in the

memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a

memory; determining if data responsive to the data request is contained in a cache of

prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines

40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Chen in view of Hill in order to enable determining if a request contains

a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by

prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises

of.

However, Case teaches where the pattern comprises a network management system IP

address (Case, page 13, last paragraph – page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

42. With respect to claim 105, Chen teaches the invention described in claim 98, including sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory; determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when

there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

Chen teaches sending a response including data responsive to the prefetched network management data request if the data responsive to the network management data request is contained in the cache of prefetched network management data and if the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 1-7); and initiating periodic data collections for data relating to the pattern if the data responsive to the network management data request is not contained in the cache of prefetched network management data but the network management data request contains a pattern defined in the memory (Chen, col. 7, lines 8-12).

Chen does not explicitly teach determining if a request contains a defined pattern.

However, Hill teaches determining if the data request contains a pattern defined in a memory; determining if data responsive to the data request is contained in a cache of prefetched data if the data request contains a pattern defined in the memory (Hill, col. 3, lines 40-53).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chen in view of Hill in order to enable determining if a request contains a defined pattern. One would be motivated to do so in order to enable prefetching only when there exists a pattern demonstrating that performance improvements are to be obtained by prefetching.

The combination of Chen and Hill does not explicitly teach what the pattern comprises of.

However, Case teaches where the pattern comprises a network management system port number (Case, page 13, last paragraph- page 14, first paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Chen and Hill in view of Case in order to use a specific type of pattern. One would be motivated to do so in order to minimize the amount of traffic generated by the network management function.

Response to Arguments

43.   Applicant's arguments filed 09 August 2005 have been fully considered, but they are not

persuasive for the reasons set forth below.

44.   *Applicant Argues:* Applicant states "In Chen, the cache merely prefetches all data related

to a request anytime the request is served (e.g., an entire row of data when only once cell in

the row was requested, see Chen, col. 5, lines 1-13). It does not prefetch data based on

whether a request matches a pattern that is defined in memory."

In Response: The examiner respectfully submits that Applicant's arguments have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Baturay whose telephone number is (571) 272-3981. The examiner can normally be reached at 7:30am - 5pm, Monday - Thursday, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alicia Baturay
October 24, 2005

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER